

# PENGARUH PENAMBAHAN ENZIM DAN WAKTU INKUBASI TERHADAP JUMLAH PROTOPLAS MESOFIL DAUN ANGGREK (*Dendrobium sp*)

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## ABSTRACT

*This research was done in order to study of effect the supplementation of enzyme and incubation time for the protoplast quantity leaf mesophyll Dendrobium sp. Protoplast can be used for culture protoplast, for somatic cross, biology research, and material for genetic manipulation.*

*This research to make use of material was Dendrobium sp Orchid. Eksplan that to used was leaf mesophyll Dendrobium sp. For protoplast isolation to used enzyme combination selulase and maserozim (Onozuka-R-10), Yakult HONSHA Co.,Ltd.,(Japan). with concentration selulase : maserozim is (0,5:0,05; 0,75:0,075; ,0:0,1). Leaf mesophyll Dendrobium sp to get a soak in enzyme solution with incubation time 12-13 hours and 14-15 hours.*

*The result shown that enzyme combination selulase and maserozim can be used for protoplast isolation leaf mesophyll Dendrobium sp Orchid. The best enzyme concentration to fit for isolation protoplast leaf mesophyll Dendrobium sp to be selulase 0,75% and maserozim 0,075 % with incubation time 14-15 hours.*

**Keyword :** *Protoplast isolation - enzim- incubation time*